

REDUCING TUBES OVER A STEPPED MANDREL TO MANUFACTURE TUBULAR
SHAFTS HAVING AN UNDERCUT IN ONE OPERATION

ABSTRACT OF THE DISCLOSURE

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A method for manufacturing hollow shafts 11' having end portions 12', 16' of greater wall thickness and at least one intermediate portion 14 of reduced wall thickness, from a tube 11 having constant wall thickness using a mandrel 21 having diameters stepped over the length, which has a first longitudinal section 22 having a smallest diameter and at least one further longitudinal section 24 having a further larger diameter,

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having the following steps:

reducing the external diameter of a first portion of the tube 11 over the first longitudinal section 22 of the mandrel 21 to produce the first end portion 12',

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reducing the external diameter of a middle portion 14 of the tube 11 over the at least one further longitudinal section 24 of the mandrel 21 to produce the at least one intermediate portion 14',

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reducing the external diameter of a further portion 16 of the tube 11 over the first longitudinal section 22 of the mandrel 21 to produce the second end portion 16'.

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Figure 1